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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,246	11/14/2001	Yoshihiro Miyamoto	Q67253	6833
7590 07/08/2008 SUGHRUE, MION, ZINN, MACPEAK & SEAS 2100 Pennsylvania Avenue, N.W. Washington, DC 20037				
EXAMINER SHIBRU, HELEN				
ART UNIT 2621		PAPER NUMBER		
MAIL DATE 07/08/2008		DELIVERY MODE PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

09/987,246

**Applicant(s)**

MIYAMOTO, YOSHIHIRO

**Examiner**

HELEN SHIBRU

**Art Unit**

2621

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 March 2008.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-10 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No./Mail Date: \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. The amendments, filed 03/28/2008, have been entered and made of record. Claims 1-10 are pending.

***Response to Arguments***

2. Applicant's arguments filed 03/28/2008 have been fully considered but they are not persuasive. See the rejection sets forth below.

***Specification***

3. The disclosure is objected to because of the following informalities: On page 9 second paragraph line 23 (or on the PG Pub paragraph 0060 line 8) 'second memory 140' should be replaced by 'second memory 104'.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

First the Examiner would like to point out that the claim recites the first storage which is disclosed as 'second storage' in the specification stores the encoded picture data. Similarly the second storage as recited in the claim is named 'first storage' in the specification and stores re-encoded data. Therefore according to the claim, the means 'first storage' stores encoded data and the means 'second storage' stores re-encoded data. According to the specification the 'first storage' stores re-encoded data and the 'second storage' stores encoded data.

The claim recites "...when the picture quality degradation of re-encoded data from second storage is less than a predetermined threshold, the selector switches its selection from first storage means to second storage means."

Replacing the first and second storage according to the specification, the above statement will be read in view of the specification language as: 'when the picture quality degradation of re-encoded data from first storage is less than a predetermined threshold, the selector switches its selection from second storage means to the first storage means.'

The Examiner hereby rejected the claims based on the specification's language of first and second storage means.

First, the switching is not taking place from the second storage means to the first; rather it is from first to second storage means. Applicant attention is directed to paragraphs 0059-0060 and figure 11, where the Applicant discloses the state of the re-encoded data threshold value and control section 107. The picture quality control section performs its function for the first storage unit. According to paragraph 0060 of the present application, the selector first reads all the re-encoded data (with smaller threshold value) then next reads the remaining frames from the second memory. According to this paragraph the selector reads the re-encoded data from the first

storage then reads the encoded data from the second storage. After the selector reads all the re-encoded data from the first storage, it switches to read the remaining frames from the second storage.

But however the claim recites the selector selecting data from the second storage means to data from the first storage means (*here remember that the Examiner states the 'first and second storages' as disclosed in the specification, i.e. first and second storage in light of the specification's word*). Therefore the claim is not supported by the specification, and the Examiner read and rejected the claims broadly.

Second, the claim recites "selection means switches its selection from data in said first storage means to data in said second storage means when the picture quality degradation of re-encoded data from said data in said second storage means is less than a predetermined threshold." (*Emphasis added*).

However according to the specification no data stored in the first storage with less predetermined threshold value. As clearly seen in figure 11 the re-encoder includes picture quality control section 107. The picture quality control section measures the degradation the picture frames. Paragraph 0059 (page 5) discloses "The picture quality control section 107 controls the encoding section 106 to re-encode a picture frame next to an I picture as a P' picture if the degradation degree of the picture quality of the I picture is larger than a preset threshold value (1)....Alternatively, if the picture quality control section 107 measures not only the degradation of the picture quality of the I picture but also the P' picture and the degradation degree of the picture quality of the P' picture is larger than the threshold value, then a picture frame away from the I picture by two frames may be re-encoded to a P' picture. Thereafter, until

the degradation degree of the following P' pictures become **smaller than the threshold value**, the re-encoding of the next picture frames to the P' picture is repeated and P' pictures **as many as J** (2) are eventually obtained as re-encoded data. A series of pieces of re-encoded data 205 thus **obtained are stored in the first memory 103.** (*Emphasis added*). According to this paragraph only data with high threshold value are stored in the first memory.

See also paragraph 0060 where Applicant discloses "..., the selector 105 reads the re-encoded data 205 of an I picture (*see (1) above*) at a decoding start point and the following P' pictures **as many as J** (*see (2) above*) ... from the first memory 105, and reads the encoded data 201 from the remaining frames from the second memory 140."

Therefore according to these paragraphs the first memory stores I picture with high threshold value, and stores P' pictures with high threshold value following the high threshold value I picture. Furthermore according to paragraphs 0059 and 0060 the selector first reads all the data from the first memory and then reads the data from the second memory. There is no disclosure in the specification that the switching is taking place **when** the picture quality from the first memory found to be less than a predetermined threshold value. Furthermore, there is no re-encoded data with less predetermined threshold in the first storage means. In addition, according to these two paragraphs the first memory only stores re-encoded data with high threshold value and the picture quality control section controls the degradation degree of the picture quality.

Therefore the previous rejection retained and the claims are read and rejected broadly.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto (US Pat. No. 5,887,110) in view of Suzuki (US Pat. No. 7,072,571).

Regarding claim 1, Sakamoto discloses an encoded moving picture data conversion device for converting encoded moving picture data compression-encoded by using inter-frame prediction, and for outputting converted data as encoded output data capable of being subjected to special reproducing (see abstract, col. 6 lines 62-67 and claim 1), the device comprising:

first storage means for storing said inputted encoded moving picture data (see col. 7 lines 35-52 and claim 21 (1 and 3) and claim 24));

decoding means for decoding said inputted encoded moving picture data to decoded data (see col. 7 lines 1-8 and claim 1 (b));

re-encoding means for re-encoding said decoded data of a picture frame in a moving picture sequence, in an intra-frame encoding mode in order to generate intra-frame re-encoded data (see col. 7 lines 8-20 and claim 14);

second storage means for storing re-encoded data, said re-encoded data including said intra-frame re-encoded data (see col. 7 lines 35-52 and claim 21 (2 and 30 and claim 24); and

selection means for making a selection of data for each picture frame, frame-by-frame, the data being selected from said encoded moving picture data stored in said first storage means

and said re-encoded data stored in said second storage means, and for outputting the selected data as said encoded output data capable of being subjected to said special reproducing (see col. 8 lines 30-42 and claim 7. See also fig. 5 which shows that each frames are encoded for the Normal playback mode and each frames are re-encoded using only the intra-frame coding scheme in order to generate intra-frame re-encoded data for the fast playback mode. During reproduction, coded video data are switched between the first storage means and the second storage means. The first storage means stores each entered video frames and the second storage means stores each intra-frame. See also figures 5-6, col. 7 lines 21-col. 9 line13 and the previous Office Actions).

Claim 1 differs from Sakamoto in that the claim further requires selection means switches its selection from data in said first storage means to data in said second storage means when the picture quality degradation of re-encoded data from said data in said first storage means is less than a predetermined threshold.

In the same field of endeavor Suzuki discloses the original coded data is used when the image is reproduced in the mode of normal reproduction. Thereby the cost of the data restructuring is reduced (see col. 11 lines 5-19). High quality image is obtained because the original coded data is used during normal reproduction (see col. 11 lines 26-41). Suzuki further discloses re-encoding is not performed when the image is reproduced in the normal mode (see fig. 7 and col. 11 lines 42-62). Suzuki discloses the selector 49 selects the output of the delay memory 14 during normal reproduction and output of unit 40 during special reproduction. An EIFO memory or the like having RAM structure is used as the delay memory (see col. 11 line 63-col. 12 line 15). Therefore in light of the teaching in Suzuki it would have been obvious to



one of ordinary skill in the art at the time the invention was made to modify Sakamoto by providing a selection means that switches its selection from encoded data and to re-encoded data when picture quality degradation is less than a predetermined threshold in order to run the coded data or decoded data on a digital signal processing equipment.

Regarding claim 2, Sakamoto discloses re-encoding means comprises:

means for re-encoding said decoded data of picture frames as many as J following after the picture frame re-encoded in the intra-frame encoding mode, by using inter-frame prediction in order to generate inter-frame re-encoded data, where J is an integer greater than zero (see col. 7 lines 21-34, fig. 7 and 8, and claim 1);

means for measuring a picture quality of re-encoded picture frames, said re-encoded picture frames including the intra-frame re-encoded picture frame and one or more inter-frame re-encoded picture frames (see col. 8 lines 10-26 and col. 11 line 56-col. 12 line 3); and

means for controlling a value of said J in accordance with said picture quality (see col. 8 lines 43-56), and

wherein said selection means comprises means for, if selecting said intra-frame re-encoded data, also selecting said inter-frame re-encoded data of the picture frames as many as J following after said intra-frame re-encoded data (see col. 8 lines 1-9 and 31-42, and col. 10 lines 49-57).

Regarding claim 3, Sakamoto discloses re-encoding means comprises.

means for skipping picture frames as many as (K-1) after the intra-frame re-encoded picture frame, where K is an integer greater than one (see col. 7 lines 21-34, and col. 11 line 56-col. 12 line 3);

means for re-encoding said decoded data of a picture frame after K frames from said intra-frame re-encoded picture frame, by using inter-frame prediction with reference to said intra-frame re-encoded picture frame in order to generate inter-frame re-encoded data (see col. 8 lines 43-63);

means for calculating the number of frames constituted of said input encoded moving picture data corresponding to said intra-frame re-encoded data in code amount (see col. 8 lines 1-26); and

means for controlling a value of said K in accordance with the number of frames calculated (see col. 8 lines 27-42), and

wherein said selection means comprises means for, if selecting said intra-frame re-encoded data, skipping the frames as many as (K-1) following after said intra-frame re-encoded picture frame, and for selecting said inter-frame re-encoded data after the K frames from said intra-frame re-encoded picture frame (see col. 10 lines 8-28).

Regarding claim 4, Sakamoto discloses re-encoding means comprises means for re-encoding said decoded data of frames at L-frame intervals in an intra-frame encoding mode generate intra-frame re-encoded data, in such a way that re-encoded data in each frame occupy at least a part of the frame and re-encoded data gathered from frames as many as M cover an entire frame area, where L is an integer greater than one and M is an integer greater than one (see col. 12 lines 4-34), and

wherein said selection means comprises means for selecting only said intra-frame re-encoded data in response to a high-speed reproducing request, and for outputting said selected

re-encoded data as said encoded data capable of being subjected to said special reproducing (see col. 12 line 59-col. 13 line 9).

Method claims 5-8 are rejected for the same reason as discussed in claims 1-4 above.

Regarding claim 9, Sakamoto discloses an encoded moving picture data conversion apparatus for converting encoded moving picture data compressed encoded by using inter-frame prediction to converted data, the apparatus comprising (see rejection of claim 1):

decoding means for decoding said inputted encoded moving picture data to obtain decoded data (see rejection of claim 1);

re-encoding means for re-encoding said decoded data at an intra-frame encoding mode in order to generate intra-frame re-encoded data (see rejection of claim 1);

replacing means for replacing a portion of said inputted encoded moving picture data by said re-encoded data, for outputting the replaced data as said converted data (see claims 1 (c) and claim 4, the inputted data is re-encoded, i.e. the input encoded data is replaced by re-encoded data).

Sakamoto fails to disclose replacing inputted encoded data when the picture degradation of the said re-encoded data from the said portion is larger than a predetermined threshold.

In the same field of endeavor Suzuki discloses the encoder is used only for special reproduction (see col. 11 lines 15-19). Suzuki further discloses high image quality is not necessary during special reproduction. And motion vector may be possible without motion detection (see col. 11 lines 26-40). Therefore in light of the teaching in Suzuki it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sakamoto by replacing inputted encoded data when the picture degradation of the said re-

encoded data from the said portion is larger than a predetermined threshold in order to run the coded data or decoded data on a digital signal processing equipment.

Regarding claim 10, the limitation of claim 10 can be found in claim 9. Therefore claim 10 is analyzed and rejected for the same reason as discussed in claim 9 above.

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELEN SHIBRU whose telephone number is (571)272-7329. The examiner can normally be reached on M-F, 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THAI Q. TRAN can be reached on (571) 272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HELEN SHIBRU/  
Examiner, Art Unit 2621  
June 27, 2008

/Thai Tran/  
Supervisory Patent Examiner, Art Unit 2621